

**Notice of Allowability**

Application No.

10/753,968

Examiner

Thomas K. Pham

Applicant(s)

PAPIERNIK ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 04/04/2006.
2. ☒ The allowed claim(s) is/are 2-5 and 7-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Henry M. Feiereisen on 04/05/2006.

The application has been amended as follows:

**Claim 7.** (Currently amended) A method for identifying a control path of a controlled system, comprising the steps of:

determining at least one deterministic perturbation correcting signal in a first identification process;

storing the perturbation correcting signal in the form of a function; [and]

identifying a control path of the controlled system in a second identification process by adding to the controlled system the at least one stored deterministic perturbation correcting signal with a negative feedback[.]; and

applying in the second identification process to the input of the controlled system a stimulus signal for exciting the controlled system,

wherein the stimulus signal has a broad-band frequency spectrum.

***Reasons for Allowance***

2. Claims 2-5 and 7-18 are allowed.
3. The following is an examiner's statement of reasons for allowance:

While Weihrich et al. (U.S. Patent No. 5,036,265) discloses a method for eliminating the effect of periodic disturbance variable having a known, variable frequency. The correction signal required to exactly compensate for the disturbance variable is determined from the sine and cosine component of the periodic disturbance signal component by means of frequency-controlled function generators and a complex phasor calculation. Weihrich does not disclose a stimulus signal for exciting the controlled system, wherein the stimulus signal has a broad-band frequency spectrum, or using Fourier transform for transforming an input signal and an output signal of the controlled system into the frequency domain, dividing the Fourier-transformed output signal by the Fourier-transformed input signal, and computing transmission function to identify the control path as part of the second identification process; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

And Wise (U.S. Patent No. 5,777,871) discloses a servo control system with electronic feedback control including digital and analog error compensation employed in aircrafts, ground vehicles, robots and the like with or without input affect of the operators. Both time-delay and single pole response are given an operating range, applicable from very quick to relatively slow or tired operators. Wise does not disclose Fourier-transforming an input signal and an output signal of the controlled system into the frequency domain, dividing the Fourier-transformed output signal by the Fourier-transformed input signal, and computing transmission function to

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identify the control path as part of the second identification process; and other limitations related to these features in combination with the remaining elements and features of the claimed invention.

The prior art of record fails to teach or fairly suggest to one of ordinary skill in the art at the time of the invention, in conjunction with all the other claimed limitations, a method for identifying a control path of a controlled system having all the claimed features of applicant's instant invention, specifically including: a stimulus signal for exciting the controlled system, wherein the stimulus signal has a broad-band frequency spectrum, Fourier-transforming an input signal and an output signal of the controlled system into the frequency domain, dividing the Fourier-transformed output signal by the Fourier-transformed input signal, and computing transmission function to identify the control path as part of the second identification process.

Also, there is no motivation to combine the ... reference with the ... reference to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday to Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Thomas Pham**

*Patent Examiner*



April 5, 2006



**Anthony Knight**  
Supervisory Patent Examiner  
Group 3600